

WASHING MACHINE WITH TILTED WASHING TUB

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to a washing machine with a tilted washing tub, and more particularly to a washing machine with a tilted washing tub, which is capable of allowing its casing to be perpendicular in the same manner as that for a washing machine with a perpendicular washing tub, despite the presence of the tilted washing tub.

2. Description of the Prior Art

In general, a washing machine with a tilted washing tub allows the front upper portion of its washing tub to be tilted forward, thereby allowing a user to conveniently put laundry into and take laundry out of its washing tub.

FIG. 1 is a cross section showing a prior art washing machine with a tilted washing tub.

The prior art washing machine with a tilted washing tub includes a casing 104, which is provided with a folding door 102 and constitutes the outer periphery of the washing machine. A washing tub 105 is positioned in the casing 104 to be tilted forward at a predetermined angle. The washing tub 105 is comprised of an outer tub 106 situated in the casing 104 to be tilted at a predetermined angle for containing washing water, and an inner tub 108 situated in the outer tub 106 for washing and spin-drying laundry. A drive motor 110 is situated under the outer tub 106 to rotate the outer tub 106. A plurality of suspension rods 112 serve to support the outer tub 106 and damp vibrations.

The outer and inner tubs 106 and 108 are situated to be tilted forward at a predetermined angle. Accordingly, an front upper protrusion 116 is formed on the upper sub-portion of the front portion of the casing 104 to correspond to the shape of the front upper portion of the tilted washing tub 105, and a rear lower protrusion 118 is formed on the lower sub-portion of the rear portion of the casing 104 to correspond to the shape of the rear lower portion of the tilted washing tub 105.

However, in the prior art washing machine, it is inconvenient to put laundry into and take laundry out of the inner tub 108 because the front upper protrusion 116 of the casing 104 is projected forward and the inner tub 108 is spaced apart from a user by a distance to which the front upper protrusion 116 is projected. Additionally, the front portion and two side portions should be manufactured separately and assembled together so as to form the front upper protrusion 116 on the front portion of the casing 104. Furthermore, since the rear portion of the casing 104 on which the rear lower protrusion 118 is formed should be manufactured separately and assembled with the side portions together, the manufacture and assembly of the casing 104 is complicated.

In general, four suspension rods 112 are connected to the four corners of the casing 104, respectively. The casing 104 is tilted forward at a predetermined angle, so it is difficult to form rod supports in order to hook the suspension rods 112.

Furthermore, even when washing capacities are the same, different casings should be manufactured for the washing machine with a tilted washing tub and the washing machine with a perpendicular washing tub.

SUMMARY OF THE INVENTION

Accordingly, the present invention has been made keeping in mind the above problems occurring in the prior art,

and an object of the present invention is to provide a washing machine with a tilted washing tub, which is capable of allowing laundry to be easily put into and taken out of the tilted washing tub by the removal of a front upper protrusion, which is capable of reducing the manufacturing costs of the washing machine by allowing one type of casing to be commonly used for the washing machine with the tilted washing tub and a washing machine with a perpendicular washing tub, and which allows the parts of the washing machine to be easily attached to the washing machine.

Another object of the present invention is to provide a washing machine with a tilted washing tub, which allows its rear cover, used for wiring and assembling processes, to be fitted to the rear portion of its casing in a sliding fashion, thereby facilitating the assembly of the rear cover to the casing.

In order to accomplish the above object, the present invention provides a washing machine with a tilted washing tub, comprising: a casing on the rear portion of which an opening is formed, the opening being covered with a rear cover provided with an outward protrusion; a washing tub consisting of outer and inner tubs, the outer tub being positioned in the casing to be tilted forward at a predetermined angle for containing washing water, the inner tub being positioned in the outer tub for washing and spin-drying laundry; and drive means for rotating the outer tub.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a cross section showing a prior art washing machine with a tilted washing tub;

FIG. 2 is a cross section showing a washing machine in accordance with an embodiment of the present invention;

FIG. 3 is a perspective view showing the casing of FIG. 2;

FIG. 4 is a perspective view showing the rear cover shown in FIG. 3 and a shock-absorbing element attached to the rear cover; and

FIG. 5 is a perspective view showing a construction for assembling the rear cover and the casing together in detail.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Reference now should be made to the drawings, in which the same reference numerals are used throughout the different drawings to designate the same or similar components.

FIG. 2 is a cross section showing a washing machine in accordance with an embodiment of the present invention.

A washing machine with a tilted washing tub in accordance with an embodiment of the present invention includes a casing 4, which is provided with a folding door 2 and constitutes the outer periphery of the washing machine. A washing tub 5 is positioned in the casing 4 to be tilted forward at a predetermined angle. The washing tub 5 is comprised of an outer tub 6 situated in the casing 4 to be tilted at a predetermined angle for containing washing water, and an inner tub 8 situated in the outer tub 6 for washing and spin-drying laundry. Drive means 12 is situated under the outer tub 6 to rotate the outer tub 8. A plurality of suspension rods 112 serve to support the outer tub 106 and damp vibrations.

As illustrated in FIGS. 2 and 3, the casing 4 includes a body, which is integrally comprised of a front portion 15 and